

Internet Addiction: An Interpersonal Perspective

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Abstract

Internet addiction has become important as people increasingly spend time online conducting every day affairs. The excessive use of the Internet may be due to a number of different reasons and a wide variety of consequences. Therefore, the objective of this study was to understand the Internet addiction phenomenon. This quantitative study focused on the interpersonal relationship perspective, perceived online attachment motivation and perceived online relationship commitment, to explain excessive use of the Internet. A questionnaire survey to 1,443 secondary school graduates found that Internet addiction was significantly related to the perceived online attachment motivation ($\beta = .180, p < .001$) and the perceived online relationship commitment ($\beta = .366, p < .001$). The model explained 25.8 percent variance of the Internet addiction measured. Implications due to the need of interpersonal relationship and the consequences of Internet addiction are discussed.

Introduction

This study aims to explain the phenomenon of Internet addiction. Internet addiction is a global issue, and occurs when too many people use their smartphones in a variety of ways for excessive amount of time. There might not be an objective measure of what was excessive amount of time. Rather, prior studies explained Internet addiction in terms of the needs and dependence of an individual on the Internet in such a way that brings detrimental consequences [1,2]. There have been a number of studies trying to search for the factors contributing to Internet addiction across the globe over the last two decades [1,3,4]. However, there are fewer studies that examine the issue from an interpersonal relationship perspective. Problems of excessive use of the Internet disrupted marriages, dating relationships, parent-child relationships, and close relationships due to the need to form online friendship with excessive use of the Internet [1].

Based on the theory of belong [5], humans have a basic need to social contact and communion with others. If this attachment need is satisfied, one would feel safe and feel good. Otherwise, if one is excluded from social contact, both psychological and physical well-being face potential harm. In other words, human can easily form relationships and resist dissolving existing relationships. Human beings need to make new friends and to have social contact in order to feel good. Human beings feel bad if friendships are broken. Therefore, there is always a need to continue these relationships in order to maintain a frequent and consistent social contact. That explains an individual's commitment to an existing relationship by not breaking a relationship.

This need to belong extends into the Internet world. Existing literature [6] explained Internet use with respect to the relationship formation online, extending the need to belong to the online context.

In this study, we explore the phenomenon of Internet addiction and based on the theory of belong, explain Internet addiction from the interpersonal relationship perspective. The research question is: What are the factors predicting Internet addiction, from an interpersonal relationship perspective?

This paper is organized as follows. It started with a literature review on Internet addiction, Internet relationship and a review of the theory of the need to belong. A model framework was suggested to explain

Publication History:

Received: June 18, 2016

Accepted: December 27, 2016

Published: December 29, 2016

Keywords:

Internet addiction, Online attachment motivation, Online relationship commitment, Interpersonal relationships

Internet addiction from an interpersonal relationship perspective. The research design of this study utilized a survey questionnaire for data collection. Data analysis explained the instrument validation. Then, the proposed model was analyzed to explain the data. Discussion and implications followed.

Literature Review

Internet addiction

Internet use has been increasing from year to year since 1995 when the Internet was open to the public from military and higher education. More recently, due to the development of smartphones, the public found it even more convenient to go online and use their smartphones. In a recent 2014 global report, it predicted that there would be over 1.91 billion smartphone users across the globe where there would be an increase of 12.6% to near 2.16 billion in 2016 [7]. In particular, in March 2015, the number of mobile service subscribers in Hong Kong was 16.95 million, representing one of the highest penetration rates in the world at about 233.3 per cent where among these 16.95 million subscribers, 12.25 million were 3G/4G service customers [8]. It appears that going online has never been easier. However, the ease of going online has also spawned problematic behavior namely excessive use of the Internet, which leads to negative behavior.

Prior studies identified problems in psychological/emotional conflict, time management and neglect work [4]; while other studies found psychopathology problems, such as, substance use disorder, attention-deficit disorder, depression, social phobia, and sleep disorder [9]. Earlier, studies also suggested academic failure, reduced

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Citation: Ma WWK, Wu A (2016) Internet Addiction: An Interpersonal Perspective. Int J Journalism Mass Comm 3: 122. doi: <https://doi.org/10.15344/2349-2635/2016/122>

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work performance, even marital discord and separation were the results of excessive Internet use [1].

On the other hand, previous studies also identified a number of reasons to explain the excessive use of the Internet. For example, Lee, Ko and Chou [10] found that Internet expectancies, especially positive expectancy, which refers to one's beliefs about the beneficial effect of a substance (e.g., Internet), positively predicted students' attitudes toward online games and online social interaction, which in turn predicted their respected preferences and Internet addiction. Moreover, Chang [9] found contributing factors to Internet addiction include psychological characteristics, parenting styles, and socio-economic changes. In Chang's study of 1,076 secondary school students, results from multi-nominal logistic regression indicated that makes between grade 7-9, often had poor relationships with their parents, and also saw higher self-reported depression scores, which were significantly associated with the diagnosis of Internet Addiction Disorder (IAD). In another study among university students, loneliness, self-esteem and life satisfaction were found significantly associated with Internet addiction. Furthermore, Internet addiction scores were found to be higher in university students that reported use of online gambling, pornographic sites, and online games [4]. In summary, Internet addiction appears to be a global phenomenon. A number of factors contributing to Internet addiction were identified and problems due to excessive use of the Internet were also found.

However, Young [2] characterized Internet addiction as a form of cyber sexual addiction, cyber-relationship addiction, net compulsion, information overload, and addiction to interactive computer games where relationship function in cyber-relationship addiction is one of the key areas of concern in Internet addiction [1], "*Marriages, dating relationships, parent-child relationships, and close friendships were disrupted by excessive use of the Internet,*" and "*Marriages and dating relationships were the most disrupted when dependents formed new relationships with 'on-line friends' (p.241).*" The study argued that marriages, dating relationships, parent-child relations, and close friendships would be negatively impacted if one spent too much time online. The more time Internet addicts spent on-line, they gradually spent less time with friends and family while going online on their own. When the behavior of excessive Internet use first emerges, loved ones might expect it to be temporary. However, just the contrary, Internet addiction behavior persists and only grows over time. Instead, Internet use continued and increased in both time and energy spent. Internet addicts often become angry at others if anyone questions their behavior, or tries to take away their time from using the Internet. They do not admit to the problem, but to avoid conflicts they engage in lies and hide how long they spent online. These behaviors created distrust and over time hurt the quality of once stable relationships [11]. Other studies supported these interpersonal relationship disruption problems. For example, Lin and Tsai [12] found that people addicted to the Internet use the Internet in a compulsive manner and show symptoms of withdrawal symptoms, and admit that Internet use negatively affects their lives in parental relationships. Seo, Kang and Yom [3] found that interpersonal problems were closely associated with Internet addiction.

Prior studies tried to examine what applications were most utilized in order to understand the reasons behind excessive Internet use. In particular, focusing on the relationship perspective, research found that, comparatively, Internet addicts used the two-way communication functions available on the Internet, including chat rooms, newsgroups, or e-mail [1]. Internet addicts enjoyed those

aspects of the Internet, which allowed them to meet, socialize, and exchange ideas with new people through highly interactive mediums. The Internet has the built in capabilities of interaction designs between users, versus the one-way broadcast nature of traditional newspaper, radio, TV media [13]. The recent development of social media even treats these highly interactive functionalities as their core competence to invite new members. For example, social networking platform Facebook just announced its daily active users exceeded 1 billion worldwide [14]. Facebook provides interactive functions including Like, Comment, Share, Upload Photo and video, meeting and allows people to become accept or deny becoming friends. Other social media platforms such as Twitter and Instagram, have different focuses than Facebook although at the core many of them feature interactive functions such as instant messaging, photo sharing, video sharing and online games.

Why? Prior studies suggested that *forming new relationships* with online friends were viewed "*as exciting, and in many cases lead to romantic interactions and Cyber-sex (online sexual fantasy role-playing)*" [1]. Cybersex and romantic conversations were perceived as harmless interactions as these sexual online affairs did not involve touching and electronic lovers are geographically separated. However, Internet addicts neglected their spouses, leaving no quality time for their marriages. Finally, Internet addicts continued to emotionally and socially withdraw from their marriages, exerting more time and more effort to maintain recently discovered online relationships. The impact on marriages and dating relationships might also extend to parent-child relationship and close friendships with the same arguments. Interesting, the need for relationships on the Internet actually destroyed the close relationships people addicted to the Internet already once had.

Therefore, with respect to the above review, this study aimed to focus on the interpersonal relationship perspective to explain Internet addiction. The research question is: What are the factors predicting Internet addiction, from an interpersonal relationship perspective?

Relationship formation on the Internet: What is the big attraction?

Research on intimate relationships shown that both self-disclosure and partner disclosure, which helps create emotional bonds, increases the experience of intimacy in interactions [15-17]. The relative anonymity of Internet interactions greatly reduces the risks of self-disclosure because one can share one's inner beliefs and emotional reactions with much less fear of disapproval and sanction [17]. For example, the above studies suggested that a couple would argue about how to spend the leisure time rather than respect the choice of the other half.

On the contrary, if one shares with his or her partner or close friends but is rejected or feels rejected, it may be unlikely that individual would share again the future because one hopes not to affect his or her relationships with the partner or close friends. Research suggests that people often engage in greater self-disclosure with strangers because a stranger does not readily have access to a person's social circle [19]. However, people often have repeated interactions with those they get to know online so that early self-disclosure lays the foundation for a continuing and close relationship [6]. And still, this repeated and close relationship would not affect a person's real social circle because the person you know online is thought to be far away from your life.

Moreover, people communicate online to establish close relationships because online communication is not inhibited by physical appearance (attractiveness), or visible shyness or social anxiety [17]. Without these inhibitors, people would have greater self-disclosure of intimate information to begin to develop close relationships. Research studies found these features not only have a strong impact on first impressions, but also in determining whether a friendship or romantic relationship will begin between two people [20]. Thirdly, the unique structure of the Internet allows individuals to easily find others who share similar interests. Research studies found that people tend to be more attracted to others who are similar to ourselves and share our opinions [21]. Further, even within longstanding relationships, the more similar two people are, the more compatible they are, and the more likely married couples are to remain together [22]. On the Internet, people join newsgroups and online communities to connect with others who share their interests. This allows the members to move quickly forward to find out what other key interests they might share, and may provide a head start to relationships [6].

Therefore, McKenna et al. [6] concluded that Internet interactions facilitate the rapid formation of online friendships, and the formation of stronger online relationships as the distinct qualities for Internet relationships. In particular, a more stable and durable foundation for the relationship will develop significantly faster over the Internet than will relationships begun offline because of the greater ease of self-disclosure, as well as the founding of the relationship on, say, shared interests. In the other words, Internet relationships “tend to develop closeness and intimacy more quickly than do real-life relationships (p.20).” If it is the case that these relationships form on the basis of deeper factors, one would expect not only that these relationships will become intimate quickly, but that they will be stable over time. In comparison, Internet relationships survive and flourish over the relationships based only on, say, physical attractiveness alone.

In summary, empirical evidence [6] supports that (1) close and meaningful relationships do form on the Internet; (2) Internet relationships tend to develop closeness and intimacy more quickly than do real-life relationships; (3) online relationships remained relatively stable and durable over a long time (e.g., over the 2-year period in the study); (4) the stability of these Internet relationships compares quite favorably to that of relationships that form and endure solely in the traditional face-to-face world; (5) online relationships were as real, as important, and as close as their non-Internet relationships, leading to close, strong and enduring romantic relationships; and (6) people who meet on the Internet, in the absence of superficial features, show a stronger relation between the quality of the conversation and how well they feel they know the other person, and their overall liking ratings for that person. The quality of the interaction, especially the intimacy and closeness attained, determined liking, without a disturbance of the superficial features which overwhelm interpersonally important factors.

Theoretical foundation—the need to belong

The above discussion of forming close and intimate relationships over the Internet and those relationships being stable and durable is not without theoretical foundation. The theory of the need to belong suggests that human being has the basic need for frequent, no aversive interactions within an ongoing relational bond [23]. People form social attachments readily under most conditions [24,25], and resist the dissolution of existing bonds. Belongingness appears to have

multiple and strong effects on emotional patterns and on cognitive processes. For example, in general, the formation of social bonds is associated with positive emotions [26]. On the other hand, basic patterns of thought appear to reflect a fundamental concern with social relationships where people spontaneously classify incoming information in terms of social relationships [27]. On the contrary, lack of attachments is linked to a variety of ill effects on health [28], adjustment [29], and well-being [23]. Firstly, the theory of the need to belong hypothesized that social bonds should form relatively easily, without requiring specifically conducive circumstances, suggesting that the need to belong is not a derivative of other needs [5]. In the other words, people seem widely and strongly inclined to form social relationships quite easily in the absence of any special set of eliciting circumstances or ulterior motives. Friendships and group allegiance seem to arise spontaneously and readily, without needing evidence of material advantage or inferred similarity. Not only do relationships emerge naturally, but people invest a great deal of time and effort in fostering supportive relationships with others [30,31]. People strongly and generally resist the dissolution of relationships and social bonds where this resistance appears to “go well beyond rational considerations of practical or material advantage (p.503).” In other words, external threats, such as being attacked, seem to increase the tendency to form strong bonds. If Internet addicts were being criticized of excessive use of the Internet, they would spend even more time and effort on such social interactions to form strong bonds and online relationships. They would finally lie and hide their intent and excessive use behavior instead [11,12]. Secondly, the belongingness hypothesis predicts that people should generally be at least as reluctant to break social bonds as they are eager to form them in the first place [5]. Further, people try to preserve relationships and avoid ending those relationships as the tendency for human beings to respond with distress and protest to the end of a relationship is nearly universal, even across different cultures and across age span [25]. In the other words, people strongly and generally resist the dissolution of relationships and social bonds, and “the resistance appears to go well beyond rational considerations of practical or material advantage (p.503).” If Internet addicts were prevented from the Internet interactions and relationships, they would spare all efforts to maintain the relationships, even beyond their rational considerations, that such excessive use would disrupt their real-life marriage, parent-child, close friends and intimate relationships. The motivation for frequent social contact and communion with others can be considered a central influence on human behavior while relationship commitment explains close and intimate relationship exists and persists [32,33]. Therefore, this study hypothesized that:

H1a: *The greater the need to form online relationship of an individual, the higher the degree to Internet addiction of that individual.*

H1b: *The greater the need to form online relationship of an individual, the greater the need to maintaining online relationship of that individual.*

H2: *The greater the need to maintain online relationship of an individual, the higher the degree to Internet addiction of that individual.*

Methodology

Subjects and data collection

This study aimed to study young adults as there were Internet natives and they were heavy users of the Internet. They probably all have mobile phones and broadband Internet connections in school and at home. The respondents of this study were secondary schools leavers. All the respondents were given a paper based questionnaire at

the time they were waiting to register for enrolment at a local university in Hong Kong. The questionnaire took them less than ten minutes to complete. They were voluntary to join and the questionnaires were collected right after they completed. All the questionnaires issued were collected at the end. Finally, there were 1,443 questionnaires issued, completed and collected back. Among them, 458 male (31.8%) and 984 female (68.2%) where one did not indicate the gender. This ratio was consistent with the composition of the university students as a whole. They aged mainly from 16 to 24 ($M = 18.2$; $SD = 1.207$).

Measures

A questionnaire survey was conducted. The survey questionnaire included two parts. The first part asked the demographics of the respondents including sex, age and daily average Internet connection time.

The second part asked about their attitudes and opinions on using the Internet. Based on pathological gambling as a model, Young [1] defined Internet addiction as an impulse-control disorder that does not involve an intoxicant. Young [1] further developed a brief eight-item questionnaire referred to as a Diagnostic Questionnaire (DQ) that modified criteria for pathological gambling to provide a screening instrument for classification of participants. Participants who answered “yes” to five or more of the eight criteria were classified as dependent Internet users (Dependents), and the remainder were classified as nondependent Internet users (Nondependents). In this study, we adopted the eight-item questionnaire. However, we did not just classify the participants as Internet addicts or not, but also wanted to know the relationships of the factors and the degree of dependence of the individual in Internet use. Therefore, we measured the eight-item using a Likert’s scale, ranged from 1 (strongly disagree) to 7 (strongly agree) instead. Therefore, we could measure Internet Addiction as a scale rather than dividing the subjects into only two groups, the dependents and the nondependents. This approach was also supported to Young’s [2] another scale developed for measuring Internet addiction. Accordingly, we could examine the hypothesis, that is, the greater the score in each item and in overall eight items, the higher the degree of dependence of the participants in Internet use. In the construct validation process, one of the eight items was dropped, left seven items in further analysis.

In order to measure the need to measure an individual to form social bonds and how online platforms would satisfy such needs, prior studies [33,34,] defined perceived online attachment motivation as “the degree to which an individual believes that he or she can improve his or her social interaction and the sense of communion with others online.” They also defined perceived online relationship commitment as “the degree to which an individual believes that he or she can persist in a relationship with others online” to measure the need of an individual to maintain / not breaking social bonds and how online platforms would satisfy such needs. Both of the scales were a five-item questionnaire and were measured by a Likert’s scale, ranged from 1 (strongly disagree) to 7 (strongly agree). The higher the score of the scales an individual evaluates the online platforms, the more the individual thinks the online platforms satisfy the individual’s needs to form social bonds and to not break social bonds in that online platform.

Findings

Instrument validation

Validity is the degree to which a measure accurately represents what

it is supposed to represent, whereas reliability is the degree to which the observed variable measures the “true” value and is “error free” [35]. The validation of the instrument was examined on both its reliability and validity.

The reliability of the constructs were measured by both the Cronbach’s alpha (α) and the composite reliability (CR) which were all greater than 0.8, hence all the constructs were internally consistent [36] (Table 1).

| | M | SD | α | CR |
|--|-------|--------|----------|------|
| Perceived Online Attachment Motivation | | | | |
| POAM1 | 3.618 | 1.4931 | .903 | .927 |
| POAM2 | 3.430 | 1.5320 | | |
| POAM3 | 3.974 | 1.5630 | | |
| POAM4 | 4.016 | 1.5600 | | |
| POAM5 | 3.957 | 1.5564 | | |
| Perceived Online Relationship Commitment | | | | |
| PORC1 | 3.566 | 1.5176 | .908 | .930 |
| PORC2 | 3.780 | 1.5489 | | |
| PORC3 | 3.282 | 1.5070 | | |
| PORC4 | 2.938 | 1.5484 | | |
| PORC5 | 3.202 | 1.5532 | | |
| Internet Addiction | | | | |
| ADDICT1 | 3.557 | 1.5483 | .847 | .883 |
| ADDICT2 | 3.069 | 1.5028 | | |
| ADDICT3 | 2.952 | 1.5400 | | |
| ADDICT4 | 2.470 | 1.4388 | | |
| ADDICT6 | 2.439 | 1.6206 | | |
| ADDICT7 | 1.975 | 1.3967 | | |
| ADDICT8 | 2.776 | 1.7797 | | |

Table 1: Descriptive Analysis of Variables.

| Construct | Factor Loadings | Construct | Factor Loadings | Construct | Factor Loadings |
|-----------|-----------------|-----------|-----------------|-----------|-----------------|
| POAM1 | .787 | PORC1 | .838 | ADDICT1 | .697 |
| POAM2 | .834 | PORC2 | .888 | ADDICT2 | .817 |
| POAM3 | .888 | PORC3 | .891 | ADDICT3 | .744 |
| POAM4 | .860 | PORC4 | .821 | ADDICT4 | .789 |
| POAM5 | .867 | PORC5 | .825 | ADDICT5 | .691 |
| | | | | ADDICT6 | .666 |
| | | | | ADDICT7 | .631 |
| AVE | .719 | | .728 | | .521 |

Table 2: Discriminant and Convergent Validity: Factor Loadings.

The construct validity of the instrument was analyzed using confirmatory factor analysis for both its convergent and discriminant validity. The above table showed the results of confirmatory factor analysis with factor loadings of each item to its corresponding latent variable (Table 2). All the factor loadings were significant at the $p < .001$ level. The AVE of each of the construct was greater than 0.5, exhibited convergent validity of the construct [37]. Furthermore, the testing results showed that the instrument exhibited discriminant validity, as

each of the diagonal loadings was greater than the remaining vertical and horizontal loadings (Table 3). Therefore, the instrument exhibited both convergent and discriminant validity.

| | POAM | PORC | ADDICT |
|--------|-------|-------|--------|
| POAM | 0.848 | | |
| PORC | 0.694 | 0.853 | |
| ADDICT | 0.434 | 0.491 | 0.722 |

Table 3: Discriminant validity test.

The explanatory power of the model for individual constructs was examined using the resulting R^2 for each dependent construct. Results found that the adjusted R^2 or the variance of Internet addiction explained by the model was 0.258 while for variance of Perceived Online Relationship Commitment explained was 0.482. That means, for every unit of Perceived Online Attachment Motivation and Perceived Online Relationship Commitment increase, there is an increase of 0.258 unit of Internet Addiction. For every unit of Perceived Online Attachment Motivation increases, there is an increase of 0.482 unit of Perceived Online Relationship Commitment.

The predictive power of the model was examined and the postulated hypotheses tested based on the path coefficients between the constructs. The data supported all the causal paths in the postulated model. The path coefficient from Perceived Online Attachment Motivation to Internet Addiction was 0.180 ($p < .001$) while from Perceived Online Relationship Commitment to Internet Addiction was 0.366 ($p < .001$). The path coefficient from Perceived Online Attachment Motivation to Perceived Online Relationship Commitment was 0.694 ($p < .001$). That was, Perceived Online Attachment Motivation had both a direct effect ($\beta = .180$) and an indirect effect ($\beta = .694 \times .366 = .254$) and a total effect of .434 towards Internet Addiction (Figure 1).

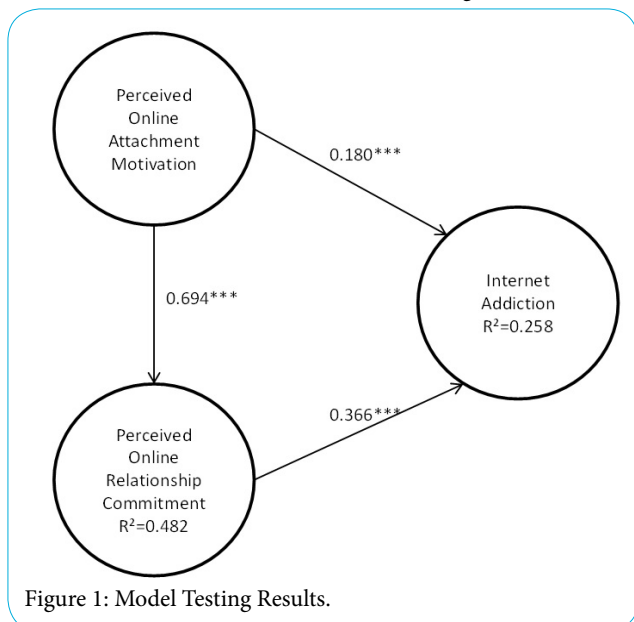


Figure 1: Model Testing Results.

Discussion

In this study, Internet addiction was examined. Prior studies examined the extent of problems due to the excessive use of Internet, resulted in personal, family, and occupational problems similar to those documented in other established addictions such as pathological gambling, eating disorders, and alcoholism [40,41,42]. Problems

reported were classified into five categories: *academic, relationship, financial, occupational, and physical* [1]. In this study, we focus on the interpersonal relationship problem of excessive Internet use and try to explain Internet addiction from the interpersonal relationship perspective. The research question is: What are the factors to Internet addiction from the interpersonal relationship perspective?

Based on the theory of the need to belong, people form social attachments readily under most conditions and resist the dissolution of existing bonds [5]. From the analysis of Internet relationships, Internet users would form social bonds easily online where those social bonds are stable and endure [6] due to a number of reasons, such as shared interest, deeper self-disclosure without the presence of physical attraction or shyness inhibitors. Empirical studies confirmed the problems in the excessive use of the Internet where dependents formed new friends with online friends whom they find more exciting and romantic and thought to be harmless as online affairs did not involve touching and electronic lovers lived thousands of miles away [1]. However, dependents did not admit that online relationship could disrupt marriages, dating relationships, parent-child relationships, and close friendships.

We therefore proposed a theoretical framework from the interpersonal relationship perspective to explain Internet addiction. Perceived online attachment motivation is hypothesized to positively relate to Internet addiction where the more the degree an online platform satisfies the need of an individual to forming social bonds, the higher the degree of Internet addiction. Empirical data of this study found significant relationship between perceived online attachment motivation and Internet addiction, supported the hypothesis (H1a).

We also hypothesized that perceived online relationship commitment is positively related to Internet addiction where the more the degree an online platform satisfied the need of an individual to maintain existing social bonds, the higher the degree of Internet addiction. Empirical data of this study found significant relationship between perceived online relationship commitment and Internet addiction, supported the hypothesis (H2).

Furthermore, we hypothesized that perceived online attachment motivation is positively related to perceived online relationship commitment. In the other words, we expect that Internet friendships are not just easy to form, they are also stable and endure the Internet users urge to break the social bonds. The easier it is to form social bonds on the online platform, the greater the commitment of the Internet users to persist the existing social bonds. Due to the relationship between perceived online relationship commitment and Internet addiction, perceived online attachment motivation would then have an indirect effect towards Internet addiction. Empirical data of this study found a significant relationship between perceived online attachment motivation and perceived online relationship commitment, which supported the hypothesis (H1b). Therefore, perceived online attachment motivation has both a direct effect on Internet addiction, and an indirect effect, mediated by perceived online relationship commitment, to Internet addiction.

This model framework is also supported by uses and gratification theory which suggests that an individual user would use a medium if that medium satisfies his or her needs. The more the satisfaction an individual gets from using the medium, the user would further use more of the medium [43]. In the other words, the uses and gratification theoretical frame work has its roots to explain the possible excessive use of a medium.

This study aimed to examine Internet addiction from an interpersonal relationship perspective. Although Internet addiction has been widely examined for a number of decades, rare studies explain the phenomenon from such an angle. The significant relationships between Internet addiction and the two suggested interpersonal relationship factors, perceived online attachment motivation and perceived online relationship commitment, suggested a valid model to explain Internet addiction.

Moreover, this study provides an easy to use measure to factors, perceived online attachment motivation and perceived online relationship commitment. The easy to use ten-item questionnaire could be used as a quick check to predict the degree to Internet addiction. Necessary strategies could be devised to prevent potential excessive use of the Internet, especially at an early stage.

Limitations and Further Studies

There are several limitations of this study. Although this study examined a large sample of respondents, with about 1500 subjects, the sample is confined to a specific subject domain, that is, fresh graduates of secondary schools. This might limit the generalizability of the results of the study. Further studies should extend the population to other age range and educational background in order to provide more empirical evidence to the model. Second, although the empirical results show promising contribution of the model focusing on interpersonal relationship perspective, there are also other perspectives which needed attention. Future studies may also explore individual characteristics, such as, self-discipline or self-control; or external factors, such as, interactive features of specific applications, etc. in order to provide a richer explanation of Internet addiction.

Conclusion

This study explores the possible interpersonal relationship factors to Internet addiction. Empirical evidence showed that perceived online attachment motivation and perceived online relationship commitment significantly related to Internet addiction. While rare studies examined Internet addiction from the interpersonal relationship perspective, this study has a theoretical contribution to explain Internet addiction from a different lens. This study also provided an easy to use measure to the two constructs so that early detection of potential excessive use of Internet would be possible and appropriate strategies to prevention could be devised.

Competing Interests

The authors have no conflict of interest to disclose.

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